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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* CHARLES J. JACOBUS

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Appeal 2011-004680  
Application 09/785,385  
Technology Center 2400

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Before JEAN R. HOMERE, ST. JOHN COURTENAY III, and  
CARLA M. KRIVAK, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1-23. We have jurisdiction under 35 U.S.C. § 6(b). An oral hearing on this appeal was conducted on Nov. 7, 2012.

We Reverse.

THE INVENTION

Appellant's invention relates generally to network computing. More particularly, Appellant's invention relates to a distributed environment that supports massive groupware streaming and peer-to-peer packetized communications. (*See Spec. 1*).

Claim 1 is illustrative:

A distributed network computing environment, comprising:

a plurality of clients communicating within a multicast cloud distributed network using content specific data within messages to implement data routing and message culling in a groupware application; and

one or more network routing modules or router-embedded applets operative, in addition to normal packet-routing, to permit or inhibit the distribution of a particular message based upon the content of the message.

#### PRIOR ART

The Examiner relies upon the following references as evidence in support of the rejections:

McCanne	US 6,611,872 B1	Aug. 26, 2003
Lambright	US 6,015,348	Jan. 18, 2000
Engstrom	US 6,463,078 B1	Oct. 8, 2002
Bayrakeri	US 6,185,602 B1	Feb. 6, 2001

#### THE REJECTIONS

1. The Examiner rejected claims 1, 3, 4, 6-8, 10, 11, 14-20, 22, and 23 under 35 U.S.C. § 102(e) as being anticipated by McCanne.
2. The Examiner rejected claims 2, 12, and 13 under 35 U.S.C. § 103(a) as being unpatentable over the combination of McCanne and Lambright.
3. The Examiner rejected claims 5 and 21 under 35 U.S.C. § 103(a) as being unpatentable over the combination of McCanne and Engstrom.
4. The Examiner rejected claims 9 and 19 under 35 U.S.C. § 103(a) as being unpatentable over the combination of McCanne and Bayrakeri.

#### PRIOR APPEALS

1. *Ex parte Jacobus*, Appeal No. 2006-2763, Application No. 09/785,383, decided on January 31, 2007 (Examiner affirmed).
2. *Ex parte Jacobus*, Appeal No. 2009-000997, Application No. 09/785,383, decided on July 16, 2009 (Examiner reversed).

CONTENTIONS

Appellant contends that McCanne does not teach or suggest routing based upon the content of the message, as claimed:

On page 3 of the Final OA, the Examiner notes that McCanne is directed to providing "application-level control to be applied to transferred data." This is true. However, the control *is applied to the data*. In the case of Appellant, essentially the opposite is true: rather than application level control being applied to transferred data, the transferred data itself i.e., the content), *is applied to the control*.

Appellant disagrees with the Examiner's argument that "[O]ne of ordinary skill in the art would clearly understand that 'application-level control' entails looking at the content of the message." *But even if this were the case, it doesn't require specific data content in a message to trigger content-based routing, as set forth in the previous Board decision.*

...

McCanne does not "provide other examples of application-level routing by looking at the content of a message." (Final OA, toward the bottom of page 2). The Examiner points to 6:60-62 of McCanne, which states that "the Packets are dropped by the overlay network if the setup mint is not present, including the time during which the setup mint is in transit." According to the Examiner, a "setup mint" refers to identifier within a database that is carded within the packet," citing 6:37-44 of McCanne. (Emphasis Added). The Examiner is incorrect on this point. The relevant passage of McCanne reads as follows:

"Using MINT, senders can attach named values to an overlay multicast group which is published into and across the overlay network, allowing other group members as well as network entities to query this "database" of state. Each tuple in the database, called a "mint", is identified by its owner (the OMN sender) and name (and implicitly the group)."  
(App. Br. 3-4, emphasis added).

As the Board will see, McCanne does not disclose a database "that is carried within the packet," as suggested by the Examiner. Rather, the setup mint is published into and across the overlay network as a separate database to be queried by other group members and network entities. If the database was carried within a packet, clearly it would not be so freely accessible. This example of McCanne does not teach that packets are inhibited from being distributed because they lack certain identifier within the packet itself (Final OA, top of page 3).

"As another example," the Examiner points to 19:51-59 of McCanne, which discusses transit addresses. According to the Examiner, "[b]ecause the application-level information is stored in a packet, it is properly interpreted as 'content' of the message." Appellant respectfully disagrees. Just as the previous Board confirmed that the mere type of content (e.g., audio or video) would be insufficient to trigger the claimed content-based routing, a peer's IP address is not content. Here the Examiner is confusing the address on a letter with the contents inside the envelope.  
(App. Br. 4).

The Examiner disagrees. As an initial matter of claim construction, the Examiner more broadly interprets the disputed limitation:

The phrase "routing based upon the content of the message" is *deceiving* because the specific claim language is "to permit or inhibit the distribution of a particular message based upon the content of the message." While content-based routing *implies* that the destination or next-hop of the packet is determined based upon the content, *the actual claim language merely requires a decision as to whether to allow the distribution of the message.*

(Ans. 10, emphasis added).

Given the aforementioned claim interpretation, the Examiner reads the disputed claim language on the McCanne reference as follows:

*McCanne* discloses at least examples of permitting or inhibiting distribution based upon content of the message. For example, *McCanne* discloses a situation where a router only forwards (i.e., permits or inhibits) a packet "if it arrives from one of its peers" by looking at the "*peer's IP address* [which] appears explicitly *in the packet*." Col. 19, 11. 54-59 (emphasis added). *Stating that the peer's IP address is "in the packet" is a clear indicator that the IP's address is part of the content of the packet. Therefore, the routing is based on the content of the packet.* Moreover, *McCanne* considers the IP address to be content in specifying that a "*content-aware* redirection server can be used to map an IP address, for instance, to a nearby overlay router." Col. 14., 11. 6-8 (emphasis added).  
(Ans. 10-11, emphasis added).

*McCanne* also discloses that the purpose of his invention is to extend routers "with application-level knowledge to carry out semantically-aware transformations conditioned on bandwidth constraints specified by external policies." Col. 4, 1. 66 to col. 5, 1. 3. In further explaining this feature, *McCanne* discloses a MediaBridge that "can make decisions as to whether, and where to route the packets." Col. 28, 11. 54-55. These decisions include "a control mechanism for restricting, managing, or modifying the relayed information." Col. 28, 11. 57-58.

One example of this control mechanism is the ability of the MediaBridge to determine whether bandwidth requirements of streaming the content would be too high and then taking restricting the bandwidth of streaming content by "reducing the image size, resolution, frame rate, color depth." Col. 29, 11. 5-7. *The MediaBridge must look to the content of the streaming content to determine its original image size, resolution, etc., in order to determine whether or not to permit distribution of the content.*

In other words, the MediaBridge would inhibit the distribution of the streaming content unless its contents were modified consistent [with] application-specific bandwidth policies. By basing its decision on the content (i.e., *content's image size, resolution, frame rate, color depth*), *McCanne's* MediaBridge performs the limitation as claimed.  
(Ans. 11, emphasis added).

Appellant further responds in the Reply Brief:

McCanne discloses only what amounts to normal packet routing, and clearly does not teach or suggest content-based routing as disclosed and claimed by Appellants. [*sic*] The Examiner raises a couple of new arguments in this regard. At the top of page 11 of the Examiner's Answer, the Examiner states that "*McCanne* considers the IP address to be content ..." citing 14:6-8 of *McCanne*. This misses the mark and falls short of reading on Appellant's claimed subject matter.

In claim 1, Appellant defines "content" in the context of "content-specific data *within messages* to implement data routing and message culling in a groupware application." Appellants' [*sic*] invention further includes one or more routing modules which, in addition to normal packet routing, permit or inhibit the distribution of a particular message based upon the content of the message. Given all of Appellant's qualifiers, *McCanne's* use of the word "content" fails to establish *prima facie* anticipation.

Apart from *McCanne's* use of the term "content-aware," Appellant's claim specifically states that the content-specific data are *within messages*. To a person of skill in the art, in packet communications, an IP address and a message itself are clearly distinctly different. *McCanne* does not use content-specific data within messages to implement data routing or message culling. Nor does *McCanne* use modules or applets to permit *or inhibit* the distribution of a particular message based upon the content of a message. Rather, according to *McCanne*, redirection can be used (as in http [normal packet routing]) to redirect a given client away from the origin server that



advertises screening content, say, to a nearby overlay router." (McCanne; 14:3-6). Thus, it appears that McCanne uses normal packet routing to permit the redirection of a single message, and not permit or inhibit the distribution of a particular message, certainly not based upon *the content of the message*.

Beginning toward the middle of page 11 of the examiner's Answer, the Examiner argues that McCanne discusses "semantically-aware transformations conditioned on bandwidth constraints, including a control mechanism for restricting, managing, or modifying the relayed information." The example that the Examiner gives is the ability of "MediaBridge" to determine whether bandwidth requirements may be too high. According to the Examiner (and *not McCanne*) "The MediaBridge must look to the content of the streaming content to determine its original image size, resolution, etc. in order to determine whether or not to permit distribution of the content." *Again, the Examiner is misguided in concluding that size, resolution, etc. is the same as content itself.*

Even if McCanne looked at "how big" a particular packet is, that is *not the same* as using the *content itself* to permit or inhibit the distribution of a message in addition to normal packet routing. The Examiner's argument here is similar to the one made in the past which was reversed on appeal regarding the Examiner's reliance on DeSimone to determine whether a packet contained audio or video. Again this misses the point. In Appellants' [*sic*] invention, it is the data *within the message itself* that determines distribution in a multicast cloud, and not "how big it is." In summary, *the size, resolution, frame rate, or color depth of an image is not the same as "content," and McCanne does not anticipate.*

(Reply Brief 2-3, emphasis added).

#### ISSUE

Based upon our review of the administrative record, we have determined that the following issue is dispositive in this appeal:

Under § 102, has the Examiner erred in finding that the McCanne reference discloses or describes *content-based routing in addition to* normal packet routing (i.e., “one or more network routing modules or router-embedded applets operative, *in addition to* normal packet-routing, to permit or inhibit the distribution of a particular message *based upon the content of the message*,” as claimed)?  
(See independent claims 1 and 11, emphasis added).

#### ANALYSIS

We begin our analysis by noting that the plain language of each independent claim on appeal requires: (1) one or more *network routing modules*, or (2) *router-embedded applets* that are *operative to permit or inhibit* the distribution of a particular message *based upon the content of the message*. (Claims 1 and 11).

In particular, we focus our attention on the further requirement of claims 1 and 11 that the one or more *network routing modules* or *router-embedded applets* are operative to perform the aforementioned content-based routing function *in addition to normal packet-routing*.

We conclude that under a broad but reasonable interpretation, the positively recited limitation of “*in addition to normal packet-routing*” precludes Appellants’ claims from being anticipated by a reference that *only* discloses or describes conventional packet-routing methodologies (e.g., TCP/IP) that rely on a packet address to direct packets of data (datagrams)

from source to destination by sending them to the next network node (i.e., router) that is closer to the final destination.

We particularly observe that the Examiner relies, *inter alia*, on packet address routing in McCanne to support the anticipation rejection:

*McCanne* considers the IP address to be content in specifying that a "*content-aware* redirection server can be used to map an IP address, for instance, to a nearby overlay router." Col. 14., ll. 6-8 (emphasis added).

(Ans. 11).

Contrary to the Examiner's findings regarding McCanne (*id.*), we find the use of such conventional packet routing (e.g., based upon IP addresses) is merely an example of *normal packet-routing*, within the meaning of Appellants' independent claims 1 and 11.

The claims before us are unusual in that the scope of claims 1 and 11 additionally requires the use of "*content specific data within messages* to implement data routing and message culling in a groupware application" where

one or more network routing modules or router-embedded applets [are] operative, in addition to normal packet-routing, to permit or inhibit the distribution of a particular message *based upon the content of the message*.

(Claims 1 and 11, emphasis added).

Consistent with Appellant's Specification,<sup>1</sup> we conclude that the scope of the claimed "content of the message" covers content that is

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<sup>1</sup> See, e.g., Appellant's Spec. 36, ll. 9-19: "Another example of an application which fits this model is *distribution of user customizable video, audio, or other digitized information (like medical data)*. The user controlled

considered by the USPTO to be non-functional descriptive material, such as audio, video, and textual messages intended for human perception. Such non-functional descriptive material is not accorded patentable weight if the *informational content* of the data does not change or affect a machine or computer function. *See Ex parte Nehls*, 88 USPQ2d 1883, 1887-90 (BPAI 2008) (precedential); *Ex parte Curry*, 84 USPQ2d 1272 (BPAI 2005) (informative) (Federal Circuit Appeal No. 2006-1003, *aff'd*, Rule 36 (June 12, 2006)); *Ex parte Mathias*, 84 USPQ2d 1276 (BPAI 2005) (informative), *aff'd*, 191 Fed. Appx. 959 (Fed. Cir. 2006). *See also* MPEP §2111.05, Eighth Edition, Rev. 9, Aug. 2012).

Here, because Appellant's claims "permit or inhibit the distribution of a particular message *based upon the content of the message*," we conclude that Appellant's claimed messages containing, e.g., audio, video, data, and textual content, effectively become *functional descriptive material* which *triggers* a routing decision (permitting or inhibiting the distribution of a particular message) based upon *the content of the message*, within the

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client application might provide controls for selection of different channels from one or many different sources (Figure 12). Only a single feed need be forwarded through the repeater router based on the router's understanding of the controls settings made by the user's player application. For instance, assume ten (10) video capture servers code video streams from ten alternate viewing locations at a sporting event. *The user selects at his/her viewing station which stream(s) are relevant to him/her*. All streams are sent to a router for distribution (because different users may select views from any of the streams), but *because the router knows which views are relevant to which viewers, only some data is forwarded through the router to each user client*" (emphasis added).

meaning of Appellant's independent claims 1 and 11.<sup>2</sup> Thus, within the scope of Appellant's claims, we conclude that the *contents within* the claimed *message* changes or affects a machine or computer (routing) function and therefore must be accorded weight. (Claims 1 and 11). This is an important distinction over the prior art of record that does not appear to have been fully appreciated by the Examiner. (*See* Ans. 10-11).

We note that during the oral hearing on this appeal that was conducted on Nov. 7, 2012, Appellant provided a specific (non-limiting) example of such a message-based content trigger (to the routing modules or router-embedded applets) that would permit or inhibit the distribution of a particular message: e.g., *a movie title* embedded within the message content. We also concur with the broad but reasonable claim construction of the previous Board panel which concluded that the mere *type* of content (e.g., audio or video) would be insufficient to trigger the claimed content-based routing.<sup>3</sup>

Thus, under our construction, dynamically adjusting available bandwidth on a network (i.e., adjusting Quality of Service) based *only* upon the *type* of message content (e.g., VOIP audio, or real-time video) would fall

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<sup>2</sup> *Cf.* Functional descriptive material consists of data structures and computer programs which impart functionality when employed as a computer component. *See* Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility ("Guidelines"), 1300 Off. Gaz. Pat. Office 142 (November 22, 2005), especially pages 151-152. (The Manual of Patent Examining Procedure includes substantively the same guidance. *See also* MPEP §2111.05 Eight Edition, Revision 9, Aug. 2012.)

<sup>3</sup> *Ex parte Jacobus*, 2009 WL 2137370 \*5, Appeal 2009-000997, July 16, 2009 (Examiner reversed).

outside the scope of Appellant's claims. More is required to meet Appellant's claims: e.g., messages of audio, video, data, and/or textual content that also operate effectively as *functional descriptive material* to trigger a routing decision that permits or inhibits<sup>4</sup> the distribution of the message *based on the content of the message*, this being performed *in addition to* normal packet routing, e.g., using a packet address. (See independent claims 1 and 11). Consistent with our construction which excludes *media type* from triggering a routing decision,<sup>5</sup> we also agree with Appellant that the size, resolution, frame rate, or color depth of an image is not the same as "content" *within the message itself*, within the meaning of Appellant's independent claims, and thus McCanne does not anticipate. (See Reply Brief 2-3).

Therefore, for essentially the same reasons argued by Appellant in the Briefs (as discussed above), we reverse the Examiner's anticipation rejection of independent claims 1 and 11, and associated dependent claims 3, 4, 6-8, 10, 14-20, 22, and 23.

Regarding the remaining obviousness rejections, we do not find, nor has the Examiner established, that the cited secondary references (Lambright, Engstrom, and Bayrakeri) overcome the deficiencies of McCanne, as discussed *supra*. Thus, after considering the totality of the record before us, we find the weight of the evidence supports the Appellant's

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<sup>4</sup> e.g., using message culling and/or Quality of Service bandwidth constraints.

<sup>5</sup> See n.3 *supra*.

position that the Examiner has erred. Accordingly, reverse the Examiner's rejections of all claims on appeal.

#### CONCLUSION

Based on the facts and analysis above, Appellant has established that the Examiner erred in finding that McCanne discloses or describes: content-based routing in addition to normal packet routing (i.e., "one or more network routing modules or router-embedded applets operative, in addition to normal packet-routing, to permit or inhibit the distribution of a particular message based upon the content of the message," as claimed). (*See* independent claims 1 and 11).

#### DECISION

We reverse the Examiner's decision rejecting claims 1, 3, 4, 6-8, 10, 11, 14-20, 22, and 23 under 35 U.S.C. § 102(e).

We reverse the Examiner's decision rejecting claims 2, 5, 9, 12, 13, 19, and 21 under 35 U.S.C. §103(a).

#### ORDER

#### REVERSED

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